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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,196	10/30/2000	Shmuel Shaffer	2705-119	9840

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MARGER JOHNSON & MCCOLLOM, P.C.
1030 SW MORRISON STREET
PORTLAND, OR 97205

EXAMINER

DUONG, OANH L

ART UNIT PAPER NUMBER

2155

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,196

Applicant(s)

SHAFFER ET AL.

Examiner

Oanh L. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/06/2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8, 10, 14-16, 24-27, 30, 33-36, 43-48, 49, 51 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Schuster) (US 6,170,075 B1) in view of Williams (US 5,914,956).

Regarding claims 1, 24 and 43, Schuster teaches a method comprising:

a first device establishing a connection with a second device through a network according to a packet network communication protocol (col. 1 lines 41-47 and col. 12 lines 1-4);

the first device transmitting to the second device original voice data in original packets through the connection (col.12 lines 39-48);

generating redundant data by replicating the original voice data (col. 16 lines 10-14); and

adding at least some of the redundant data to the original packet. (Col.13 lines 18-47).

Schuster does not explicitly teach detecting the connection is under utilized.

Williams teaches detecting the connection is under utilized (abstract, col. 2 lines 60-62 and col. 5 lines 52-54).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine the teachings of Schuster to include the step of detecting the connection is under utilized as taught by Williams because it would increase a connection capacity of a communications switch core without increasing the actual number of physical connections (Williams, col. 2 lines 40-45).

Regarding claim 33, Schuster teaches a retransmitting device for use in a network comprising a first device and a second device and operating according to a packet network communication protocol (Fig. 1), comprising a processor configured to:

receive from the first device original voice data in an original packet (col. 15 lines 28-30) containing a replication flag (i.e., **duplicating**/replicating packets of data **defined by said first data signal**, col. 16 lines 10-14);

transmit to the second device the original packet (col. 12 lines 39-48); and
if so, generating redundant data by replicating the original voice data (col. 12 lines 20-34, col. 16 lines 10-14 and col. 16 lines 25-27), and transmit the redundant data to the second device (col. 12 lines 37-48).

Schuster does not explicitly teach detecting whether a connection is under utilized.

Williams teaches detecting whether a connection is under utilized (abstract, col. 2 lines 60-62 and col. 5 lines 52-54).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine the teachings of Schuster to include the step of detecting the connection is under utilized as taught by Williams because it would increase a connection capacity of a communications switch core without increasing the actual number of physical connections (Williams, col. 2 lines 40-45).

Regarding claims 2 and 44, Schuster teaches the first device generates the redundant data (i.e., network server 18, col. 13 lines 18-20).

Regarding claims 3, 25, 34 and 45, Schuster teaches the first device transmits at least some of redundant data in additional packets distinct from the original packets (col. 13 lines 48-56).

Regarding claims 4, 26, 35 and 46, Schuster transmitting the redundant data to the second device (col. 13 lines 18-20).

Regarding claims 5, 27 and 47, Schuster teaches determining whether a replication flag is set, and generating the redundant data only if the replication flag is set (col. 16 lines 10-14).

Regarding claim 8, Schuster teaches the first device generates the redundant data (col. 13 lines 18-20).

Regarding claim 49, Schuster teaches the first device generates the redundant data (col. 13 lines 18-20).

Regarding claims 6, 30, 36, 48 and 57, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Regarding claims 10 and 51, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Regarding claims 14 and 54, Schuster teaches a retransmitting device that is part of the connection receiving a next one of the original packets, and wherein if the replication flag is set, the retransmitting device generates next redundant data by replicating next original voice data included in the next original packet, and transmits the next redundant data to the second device (col. 16 lines 10-16).

Regarding claims 15 and 55, Schuster teaches the retransmitting device transmits the next redundant data in at least one additional packet distinct from the next original packet (col. 13 lines 48-56).

Regarding claims 16 and 56, Schuster teaches the retransmitting device imparts at least portion of the next redundant data in a second received original packet (col. 12 lines 37-48).

Regarding claim 17, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Williams in further view of Pandula (Pandula) (US 5,640,415).

Regarding claims 7 and 29, Schuster-Williams does not explicitly teach securing additional bandwidth.

Pandula, in the same field of endeavor, teaches securing additional bandwidth (col. 3 lines 5-16). Pandula teaches such securing additional bandwidth would enable voice data to be redundantly retransmitted and thereby providing improved bit error performance and guaranteed data (col. 2 lines 5-10). For this reason, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the securing additional bandwidth of Pandula in the process of generating redundant voice data in Schuster-Williams.

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6. Claims 9, 21-23, 28, 40-42, 50 and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Williams in further view of Tsunoda (US 6,516,435 B1).

Regarding claims 9, 28, 40, 50, and 60, Schuster-Williams does not explicitly teach retransmitting device receiving a redundancy request; and in response to the redundancy request, setting the replication flag. However, Tsunoda teaches retransmitting device receiving a redundancy request, and in response to the redundancy request, setting the replication flag (e.g., see col. 24 lines 37-64 and col. 26 lines 22-49). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the redundant request in Schuster-Williams as taught by Tsunoda because such redundant request would enable the lost packets to be retransmitted. Thus, reliability of the transmission would be guaranteed

Regarding claim 21, Schuster-Williams does not explicitly teach retransmitting device receiving a redundancy request; and in response to the redundancy request, setting the replication flag. However, Tsunoda teaches retransmitting device receiving a redundancy request, and in response to the redundancy request, setting the replication flag (e.g., see col. 24 lines 37-64 and col. 26 lines 22-49). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the redundant request in Schuster-Williams as taught by Tsunoda because

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such redundant request would enable the lost packets to be retransmitted. Thus, reliability of the transmission would be guaranteed

Regarding claims 22, 23, 41, 42, 61 and 62, Schuster-Williams-Tsunoda teaches the redundancy request is issued from the first/second device (Tsunoda, col. 24 lines 53-64).

7. Claims 11, 12, 18, 19, 31, 32, 37, 38, 52, 53, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Williams in further view of Dedrick (US 5,754,787).

Regarding claims 11, 31, 32, 37, 52 and 58, Schuster-Williams does not explicitly teach the first device transmits the original voice data through an associated first modem, and wherein the method further comprises determining a surplus bandwidth capacity of the first modem; and setting replication flag if the surplus bandwidth capacity is higher than a threshold. However, Dedrick teaches the first device transmits the original voice data through an associated first modem (e.g., see col. 12 lines 45-52), and wherein the method further comprises determining a surplus bandwidth capacity of the first modem, and setting replication flag if the surplus bandwidth capacity is higher than a threshold (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine determining surplus bandwidth capacity of the modem in Schuster-Williams as taught by

Dedrick because such bandwidth capacity determination would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claims 12, 38, 53 and 59, Schuster teaches generating the redundant data (col. 13 lines 18-20). Schuster-Williams does not explicitly teach determined surplus bandwidth capacity. However, Dedrick teaches the determined surplus bandwidth capacity (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus bandwidth capacity in Schuster-Williams as taught by Dedrick because such the determined surplus bandwidth capacity would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claim 18, Schuster-Williams does not explicitly teach determining a surplus network bandwidth for transmitting the redundant data, and setting the replication flag if the surplus network bandwidth is higher than a threshold. However, Dedrick teaches, determining a surplus network bandwidth for transmitting the redundant data, and setting the replication flag if the surplus network bandwidth is higher than a threshold (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus network bandwidth in Schuster-Williams as taught by

Dedrick because such network bandwidth determination would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claim 19, Schuster-Williams teaches generating the redundant data (col. 13 lines 18-20). Schuster does not explicitly teach determined surplus network bandwidth. However, Dedrick teaches the determined surplus network bandwidth (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus network bandwidth in Schuster-Williams as taught by Dedrick because such the determined surplus network bandwidth would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

8. Claims 13, 20 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Williams in view Dedrick (US 5,754,787) in further view of Sidhu et al (Sidhu) (US 6,366,959).

Regarding claims 13 and 39, Schuster- Williams-Dedrick does not explicitly teach inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size. However, Sidhu teaches inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size (e.g., see col. 20 lines 22-44). Therefore, it

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would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the jitter buffer size in the combination of teachings of Schuster-Williams- Dedrick as taught by Sidhu because it was conventionally deployed in the art to maximize the quality of data stream for each of particular real time data application.

Regarding claim 20, the combination of teachings of Schuster, Williams and Dedrick does not explicitly teach inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size. However, Sidhu teaches inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size (e.g., see col. 20 lines 22-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the jitter buffer size in the combination of teachings of Schuster, Williams and Dedrick as taught by Sidhu because it was conventionally deployed in the art to maximize the quality of data stream for each of particular real time data application.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.D
May 30, 2005


ARJO ETIENNE
SUPERVISORY PATENT EXAMINER
UNIT 2155